

Title: A Logical Data Model for Environmental Public Health Tracking in New York City

Keyword(s): data model, surveillance, linkage, pesticides, heavy metals

Background: Many New York City, State and federal agencies gather and provide data that describe environmental hazards, human exposures, and health outcomes. The NYC Department of Health and Mental Hygiene needed to combine these data sources into a common repository for access and evaluation of the data's utility for environmental health tracking. An integrated logical data model has been designed to warehouse the data sources and report data for analysis. This poster presents the data model for two areas of initial focus for the NYC EPHT demonstration project -- pesticides and heavy metals.

Objective(s): Viewers will understand factors that influenced NYC's decisions around its EPHT data model. Viewers will become familiar with the links among priority datasets. Viewers will be able understand the strengths and limitations of the data model to support reporting and complex analyses.

Method(s): The record layouts of each data source were examined to identify potentially useful data. Key relationships among the data tables were constructed, using SQL-Server as the backend with SAS, Crystal Reports and other software providing the analytic and reporting framework.

Result(s): This poster presents the preliminary data model for pesticide and heavy metals hazard, exposure and health outcome data linkages. The model integrates EPA's pesticide registration system with NY State's pesticide use reporting system, several sources of housing quality data, community health surveys, childhood and adult lead poisoning surveillance and intervention data, and metals surveillance. Also integrated are vital statistics, hospitalizations, emergency room use and poison control data.

Conclusion(s): The model is a first step in bringing disparate data sources together to describe the hazards and outcomes of pesticides and heavy metals. The model includes a data store capable of yielding data that can be queried for analysis and reporting.

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